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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/826,317

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EXAMINER

REDDIVALAM, SRINIVASA R

ART UNIT

PAPER NUMBER

2619

NOTIFICATION DATE

DELIVERY MODE

02/11/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

tammy@ppglaw.com

Office Action Summary

Application No.

10/826,317

Applicant(s)

LARSSON ET AL.

Examiner

SRINIVASA R. REDDIVALAM

Art Unit

2619

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413).
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The replaced drawings were received on November 22, 2007. These drawings are accepted by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, and 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Cansever (US Patent No: 6,678,252 B1).

Regarding claim 1, Cansever teaches in an ad-hoc network wherein data packets are sent from a source node to a destination node via an established route, a source node (see node i in Fig.5) comprising: means for requesting route discovery between the source node and a destination node (see col.7, lines 13-20 wherein generation of a route request packet from a source node to destination node to initially identify a path from source to destination is mentioned); means for determining whether said request for route discovery between the source node and the destination node over

Art Unit: 2619

existing network connections fails (see col.7, lines 36-38 wherein source node not receiving a reply packet within a specified period of time is mentioned); and means for determining a route between the source node and the destination node by forming one or more new connections if it is determined that said request for route discovery between the source node and the destination node over existing network connections fails (see col.7, lines 59-61 wherein establishment of a new path is mentioned when the existing path becomes unusable).

Regarding claim 2, Cansever teaches the source node wherein said means for requesting route discovery comprises: means for broadcasting a route discovery request message, for a route between the source node and the destination node over one or more connections associated with one or more existing subnetworks, if the source node is a member of one or more of the existing subnetworks (see col.7, lines 21-33 wherein broadcasting of a route request packet from source node to destination node over an existing connection in a subnetwork is mentioned).

Regarding claim 3, Cansever teaches the source node wherein said means for determining whether said request for route discovery over existing network connections fails comprises: means for determining if a timely reply message is received by the source node in response to the broadcast route discovery request message (see col.7, lines 36-38 wherein the source node not receiving a reply packet within a specified period of time and re-issuing the route request packet are mentioned).

Regarding claim 9, Cansever teaches in an ad-hoc network, an arrangement for establishing a route over which data packets are to be sent from a source node to a

Art Unit: 2619

destination node, the arrangement (see Figures 2 and 3) comprising: a source node; and at least one destination node, wherein the source node (see node i in Fig.5) comprises: means for requesting route discovery between the source node and the destination node over existing network connections (see col.7, lines 13-20 wherein generation of a route request packet from a source node to destination node to initially identify a path from source to destination is mentioned); means for determining whether said request for route discovery between the source node and the destination node over existing network connections fails (see col.7, lines 36-38 wherein source node not receiving a reply packet within a specified period of time is mentioned); and means for establishing a route between the source node and the destination node by forming one or more new network connections if it is determined that said request for route discovery between the source node and the destination node over existing network connections failed (see col.7, lines 59-61 wherein establishment of a new path is mentioned when the existing path becomes unusable).

Regarding claim 10, Cansever teaches the arrangement, wherein the means for determining whether said request for route discovery between the source node and the destination node over existing network connections fails comprises: means for determining whether the source node received a timely reply in response to the request for route discovery (see col.7, lines 36-38 wherein the source node not receiving a reply packet within a specified period of time and re-issuing the route request packet are mentioned).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4, and 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cansever (US Patent No: 6,678,252 B1) in view of Toh C-K ("Associativity-Based Routing for Ad-Hoc Mobile Networks").

Regarding claim 4, Cansever does not teach specifically the source node, wherein said means for establishing a route comprises: means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks, if it is determined that a timely reply was not received.

However, Toh C-K teaches the source node comprising means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks, if it is determined that a timely reply was not received (see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH and source invoking BQ query messages are mentioned and also see section 5.1 wherein the source broadcasting BQ query message and the establishment of a new route between source node and destination node are mentioned).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the source node of Cansever to have the source node comprising means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks, if it is determined that a timely reply was not received, disclosed by Toh C-K for more efficient routing and higher throughput of data packets in ad-hoc mobile network.

Regarding claim 12, Cansever teaches in an ad-hoc network, an arrangement for establishing a route between a source node and a destination node over which data packets are to be sent, the arrangement (see Figures 2 and 3) comprising: a plurality of nodes that communicate with each other over one or more subnetworks (see Fig.2); a source node; and a destination node, wherein the source node (see node i in Fig.5) comprises: means for broadcasting a route discovery request message for a route

Art Unit: 2619

between the source node and the destination node over one or more connections associated with the one or more existing subnetworks if the source node is a member of one or more of the existing subnetworks (see col.7, lines 13-33 wherein generation of a route request packet from a source node to destination node to initially identify a path from source to destination is mentioned) ; means for determining if a timely reply message is received by the source node in response to the broadcast route discovery request message (see col.7, lines 36-38 wherein the source node not receiving a reply packet within a specified period of time and re-issuing the route request packet are mentioned).

Cansever does not teach specifically the source node comprising means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks if it is determined that a timely reply message was not received.

However, Toh C-K teaches the source node comprising means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks if it is determined that a timely reply message was not received (see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH and source invoking BQ query messages are mentioned and also see section 5.1 wherein the source broadcasting BQ

Art Unit: 2619

query message and the establishment of a new route between source node and destination node are mentioned).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the source node of arrangement of Cansever to have the source node comprising means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks, if it is determined that a timely reply was not received, disclosed by Toh C-K for more efficient routing and higher throughput of data packets in ad-hoc mobile network.

Regarding claim 13, Toh C-K further teaches the source node of the arrangement further comprises: means for establishing a route between the source node and the destination node over one or more new connections associated with one or more newly formed subnetworks if the source node is not a member of one or more of the existing subnetworks (see section 5.2.1 wherein the movement of source node is mentioned and see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH and source invoking BQ query messages are mentioned and also see section 5.1 wherein the source broadcasting BQ query message and the establishment of a new route between source node and destination node are mentioned).

Regarding claim 14, Toh C-K further teaches the source node of the arrangement further comprises means for establishing a route between the source node

Art Unit: 2619

and the destination node over one or more new connections associated with one or more newly formed subnetworks if the destination node is not a member of one or more of the existing subnetworks (see section 5.2.2 wherein the movement of destination node is mentioned and see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH and source invoking BQ query messages are mentioned and also see section 5.1 wherein the source broadcasting BQ query message and the establishment of a new route between source node and destination node are mentioned).

Regarding claim 15, Toh C-K further teaches the source node of the arrangement further comprises: means for determining whether a route over one or more new connections associated with one or more newly formed subnetworks is desirable, if it is determined that a timely reply in response to the route discovery request message is received by the source node (see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH and source invoking BQ query messages are mentioned).

Regarding claim 16, Cansever further teaches the source node of the arrangement further comprises: means for establishing a route between the source node and the destination node over one or more connections associated with the one or more existing subnetworks, if it is determined that a timely reply in response to the route discovery request message is received and it is determined that a route over one or more new connections associated with one or more newly formed subnetworks is not desirable (see col.7, lines 17-36 wherein broadcasting of a route request packet and

Art Unit: 2619

identifying a path from source node to destination node over an existing connection in a subnetwork is mentioned).

Regarding claim 17, Cansever teaches the source node of the arrangement further comprising: means for establishing a route between the source node and the destination node over one or more connections associated with the one or more existing subnetworks if it is determined that a timely reply in response to the route discovery request message is received (see col.7, lines 17-36 wherein broadcasting of a route request packet and identifying a path from source node to destination node over an existing connection in a subnetwork is mentioned).

Cansever does not teach specifically the source node of the arrangement further comprises: determining that a route over one or more new connections associated with one or more newly formed subnetworks is desirable, and for simultaneously initiating route discovery for a route between the source node and the destination node over one or more connections associated with one or more newly formed subnetworks.

However, Toh C-K teaches the source node of the arrangement further comprises: determining that a route over one or more new connections associated with one or more newly formed subnetworks is desirable, and for simultaneously initiating route discovery for a route between the source node and the destination node over one or more connections associated with one or more newly formed subnetworks (see section 5.2.4 wherein partition of subnets due to the migration of a subnet-bridging MH

Art Unit: 2619

and source invoking BQ query messages are mentioned and also see section 5.1 wherein the source broadcasting BQ query message to establish a new route between source node and destination node is mentioned).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the source node of arrangement of Cansever to have determining that a route over one or more new connections associated with one or more newly formed subnetworks is desirable, and for simultaneously initiating route discovery for a route between the source node and the destination node over one or more connections associated with one or more newly formed subnetworks disclosed by Toh C-K for more efficient routing and higher throughput of data packets in ad-hoc mobile network.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cansever (US Patent No: 6,678,252 B1) in view of Zyren (US Patent No: 6,377,608).

Regarding claim 11, Cansever does not teach specifically the arrangement wherein the network is a Bluetooth technology based network.

However, Zyren teaches the arrangement wherein the network is a Bluetooth technology based network (see col.1, lines 25-32 wherein ad-hoc networks comprising Bluetooth radios is mentioned).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the arrangement of Cansever to include Bluetooth technology based network in ad-hoc network disclosed by Zyren to support industry standard technology i.e. Bluetooth for ad-hoc networks.

8. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cansever (US Patent No: 6,678,252 B1) in view of Toh C-K ("Associativity-Based Routing for Ad-Hoc Mobile Networks") and further in view of Zyren (US Patent No: 6,377,608).

Regarding claims 18 and 19, Cansever and Toh C-K do not teach specifically the arrangement wherein ad-hoc network is a Bluetooth technology based network and the existing and newly formed subnetworks are piconets.

However, Zyren teaches the arrangement wherein ad-hoc network is a Bluetooth technology based network and the existing and newly formed subnetworks are piconets (see col.1, lines 25-32 wherein ad-hoc networks comprising Bluetooth radios is mentioned and also piconets are mentioned in adhoc network for subnetworks).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the arrangement of Cansever and Toh C-K to have Bluetooth technology based network for ad-hoc network and piconets for the existing and new subnetworks disclosed by Zyren to support industry standard technology i.e. Bluetooth for ad-hoc networks and for efficient routing in ad-hoc networks.

Response to Arguments

9. Applicant's arguments/remarks with respect to claims 1-4 and 9-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any response to this office action should be faxed to (571) 273-8300 or mailed
To:

Commissioner for Patents,
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to
Customer Service Window
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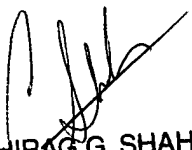
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRINIVASA R. REDDIVALAM whose telephone number is (571)270-3524. The examiner can normally be reached on Mon-Fri 9:30 AM - 7 PM (1st Friday OFF).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2619

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

S Reddivalam



CHIRAG G. SHAH
PRIMARY PATENT EXAMINER